



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER OF PATENTS AND TRADEMARKS
Washington, D.C. 20231
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/853,111	05/10/2001	Salman Akram	MICT-0012-D1-US (97-0141)	7172

21906 7590 04/03/2002

TROP PRUNER & HU, PC
8554 KATY FREEWAY
SUITE 100
HOUSTON, TX 77024

EXAMINER

CHAMBLISS, ALONZO

ART UNIT	PAPER NUMBER
----------	--------------

2827

DATE MAILED: 04/03/2002

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/853,111

Applicant(s)

AKRAM, SALMAN

Examiner

Alonzo Chambliss

Art Unit

2827

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 19 February 2002.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 15-22 and 32-35 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 15-22 and 32-35 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892) 4) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ 6) ☐ Other: _____

DETAILED ACTION

1. The amendment B filed 2/19/02 has been fully considered and made of record as Paper No. 3.

Response to Arguments

2. Applicant's arguments with respect to claims 15-22 and 32-35 have been considered but are moot in view of the new ground(s) of rejection. This action is made **Non-final**.

Specification

3. The abstract of the disclosure is objected to because one of the essential elements in the applicant's invention (i.e. spacer) is not defined in the abstract. Correction is required. See MPEP § 608.01(b).

Claim Rejections - 35 USC § 102

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

(e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.

The changes made to 35 U.S.C. 102(e) by the American Inventors Protection Act of 1999 (AIPA) do not apply to the examination of this application as the application being examined

Art Unit: 2827

was not (1) filed on or after November 29, 2000, or (2) voluntarily published under 35 U.S.C. 122(b). Therefore, this application is examined under 35 U.S.C. 102(e) prior to the amendment by the AIPA (pre-AIPA 35 U.S.C. 102(e)).

5. Claims 15-22 and 32-35 are rejected under 35 U.S.C. 102(b) as being anticipated by Alagaratnam et al. (U.S. 5,814,881).

With respect to Claims 15, 21, 32, and 33, Waki teaches stacking at least two semiconductor dies 14, 40 having substantially the same rectangular dimensions on top of one another. The dies 14, 40 are electrically connected to the lead frame. Bonding pads 34, 35, 46, and 47 of the dies 14, 40 are wire bonded to the lead fingers 61 of the lead frame (see col. 4 lines 1-5; Fig. 1). The first die 14 is mounted on the lead frame by the die paddle 12. The second die 40 is mounted only on the first die 14 (see Fig. 1).

With respect to Claims 16 and 34, the first and second dies 14, 40 are mounted in a back-to-back configuration (see Fig. 1).

With respect to Claims 17 and 35, the first die 14 is adhered to the second die 40 by an adhesive layer (see Fig. 1).

With respect to Claim 18, the first die 14 has a lead (i.e. wire) on chip configuration (see Fig. 1).

With respect to Claim 19, first die 14 is secured to the lead frame and the second die 40 is secured to the lead frame by the first die 14 (see Fig. 1).

With respect to Claim 20, the semiconductor dies 14, 40 are wire bonded to the lead frame, wherein the dies 14, 40 have facing sides and outwardly facing sides by extending wire to bond pads 34, 35, 46, and 47 on the outwardly facing sides of the dies

Art Unit: 2827

(see Fig. 1). The outwardly facing sides are the sides of the die that have bonding pads 34, 35, 46, and 47 on the surfaces.


With respect to Claim 22, the semiconductor dies 14, 40 and the lead frame are encapsulated in a single package body 90 (see Fig. 1).

Conclusion

6. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. It is cited primarily to show processes of packaging a semiconductor device, which are similar to the process of the instant invention.

Any inquiry concerning the communication or earlier communications from the examiner should be directed to Alonzo Chambliss whose telephone number is (703) 306-9143. The fax phone number for this Group is (703) 308-7722 or 7724.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Group receptionist whose telephone number is (703) 308-7956.


DAVID L. TALBOTT
PRIMARY EXAMINER
ART UNIT ~~358~~
2827

AC

AC/March 27, 2002